
ANNUAL REPORT ON THE ENVIRONMENT

CHAPTER VI

**HAZARDOUS
MATERIALS**

VI. HAZARDOUS MATERIALS

A. ISSUES AND OVERVIEW

1. Overview

Fairfax County hazardous materials concerns may be considered less significant as compared to other jurisdictions; the industrial base within the County is relatively “clean”. Nevertheless, the County does have its share of problems. Hazardous materials incidents involving spills, leaks, transportation accidents, ruptures, or other types of emergency discharges are the main concern. Also of concern is the use and disposal of hazardous materials in either daily household activities or by small quantity commercial generators. The third problem is the clean up and regulation of hazardous materials.

Although the news media is constantly reporting industrial and transportation related hazardous materials incidents, there is a general lack of awareness by the public of health and safety risks associated with the use, storage, and disposal of common household hazardous materials. Educating the public on the implications of these hazardous materials on people’s lives remains a significant goal.

2. Hazardous Materials Incidents

The Fire and Rescue Department’s Operations Division and/or Hazardous Materials and Investigative Services Section responds to all reported incidents of hazardous materials releases, spills, and discharges. Fairfax County maintains a well-equipped hazardous materials response team. The primary unit operates from Fire Station 34 in Oakton, and three satellite units are stationed at Fire Station 1 in McLean, Fire Station 11 in Alexandria, and Fire Station 26 in Springfield. These units are strategically positioned to provide rapid response and adequate coverage throughout Fairfax County. Response personnel are trained and equipped to initiate product control and mitigation measures to prevent or minimize the adverse environmental impact and damage.

The Hazardous Materials Response Team responded to 304 incidents in CY 2000. This included the release of products into the air, water, and soil. The majority of the incidents continue to be hydrocarbon and corrosive releases. In addition, there were hundreds of small releases such as gasoline, diesel fuel, antifreeze, hydraulic fluid, etc. that were handled by first responder units. In CY 2000, the Fire and Rescue Department placed in service a Spill Control Unit at Fire Station 35. This unit carries bulk supplies for spill control, absorption, and containment efforts. The team conducted regular ongoing training sessions as well as exercises with surrounding jurisdictions and state and federal agencies.

The Hazardous Materials and Investigative Services personnel responds to reported incidents and investigates complaints of potential and actual releases, many of a non-emergency nature. During CY 2000, response incidents, which had the potential to discharge hazardous materials into storm drain or surface water, included: 53 improper disposals, 33 pipeline incidents, 64 various types of product releases, and 210 petroleum releases.

In addition to the efforts of the Operations Division and Hazardous Materials Investigative Services Section personnel, the Fire and Rescue Department maintains a contract with a major commercial hazardous materials response company to provide additional support for large-scale incidents. The Fire and Rescue Department is committed to protecting the environment and the citizens through proper enforcement of the code or rapid identification, containment, and cleanup of hazardous materials incidents. (1)

3. Hazardous Materials in the Waste Stream

The disposal of household and small quantities of non-household hazardous materials into the waste stream continues to be a concern. Unlike hazardous materials incidents, the immediate impact is not as dangerous. However, the long-term impact can be just as severe. Hazardous materials in the waste stream are contaminating landfills. Sometimes hazardous materials are dumped illegally, which leads to stream and groundwater pollution and soil contamination. Household hazardous wastes are products used in and around the home that are flammable, corrosive, reactive, or toxic. These hazardous materials potentially can cause a safety problem if various household chemicals become mixed when disposed of with the regular trash. By disposing of household hazardous wastes separately, these materials can be properly handled and packaged to minimized exposure to potentially harmful chemicals and decrease the likelihood that these chemicals will enter the environment.

a. Used Automotive Oil and Fluids

A recent year-long study by the Northern Virginia Regional Commission (NVRC, formerly the Northern Virginia Planning District Commission) for the Virginia Department of Environmental Quality estimates that approximately three to 4.5 million gallons of used oil and approximately one million gallons of antifreeze are “lost” in the environment each year through improper disposal by do-it-yourselfers”, or DIYers. DIYers change their own automotive fluids (including oil, oil filters, and antifreeze) and account for 40% to 50% of those owning passenger cars. Only 15% to 30% of DIYers are believed to properly recycle or dispose of used oil. One percent or less of DIYers recycle oil filters.

This study resulted in a recommendation to re-establish a State-wide used oil recycling program aimed capturing what amounts to the 1989 Exxon Valdez oil

spill every four years. As a part of the study, NVRC developed a database of all known collection centers in Virginia – 471 private and 125 public. The study also revealed that there are about the same number of collection facilities in 1999 as in the late 1980s; however, the volume of oil generated has increased roughly 100,000 gallons per year because of more cars on the road. Convenience and public education were found to be major factors in whether DIYers recycle or not. (2)

b. Dumping into Storm Drains

Storm drains carry rain water runoff from streets. This water is not treated and goes directly into local streams. All streams in Fairfax County eventually flow into the Potomac River, which empties into the Chesapeake Bay. Anything dumped down a storm drain will follow the same path as the rain water. (3)

The cleaning-up of animal wastes and the disposal of such wastes down storm drains, as well as the disposal of leaves down storm drains, are attempts at doing a service that have the effect of introducing pollutants directly into County streams. There are also deliberate disposals of chemicals, oils and other items into the storm drains as “out-of-site, out-of-mind.” In either situation, there is a misperception that the storm drains are part of the County sewage system and that the disposal of materials down these drains does not provide a direct impact to the environment.

4. Pipelines

The following summary has been taken from the fall, 2000 edition of “LEPC Connection: A Virginia Local Emergency Planning Committee Newsletter:”

“More than 3,000 companies operate some 1.9 million miles of natural gas and hazardous liquid pipelines in the United States. The pipeline network includes 302,000 miles of natural gas transmission pipelines operated by 1,220 firms, and 155,000 miles are hazardous liquid transmission pipelines operated by 220 outfits. In addition to transmission pipelines, 94 liquefied natural gas facilities operate in the United States.” (4)

Pipelines traverse Fairfax County carrying refined petroleum for two companies and natural gas for three companies. The regulation of pipeline design, construction, operation and maintenance to ensure safe transportation of hazardous liquids and natural gas is handled by the Office of Pipeline Safety in the U.S. Department of Transportation. (4)

B. PROGRAMS, PROJECTS, AND ANALYSES

1. Fairfax Joint Local Emergency Planning Committee (FJLEPC)

The FJLEPC is comprised of representatives of the City of Fairfax, the towns of Herndon and Vienna, Fairfax County, and local business and citizens groups. The Virginia Emergency Response Council appoints representatives. LEPCs are required by Section 301[c] of Title III of the Emergency Planning and Community Right-to-Know Act (EPCRA), a freestanding provision of the Superfund Amendments and Reauthorization Act of 1986 (SARA). The committee is responsible for preparing and annually updating the Hazardous Material Emergency Response Plan (HMERP). The FJLEPC also is required to compile information on the facilities within its jurisdiction that either use, store, or manufacture hazardous materials in amounts equal to or greater than the threshold planning quantities (TPQs). Businesses with extremely hazardous materials with over the TPQ amounts must prepare a Hazardous Materials Response Plan. The plan consists of notification procedures in the event of an incident, on site means of detecting incidents, evacuation plans, clean-up resources, and identification of parties responsible for the site.

In 2000, FJLEPC began increasing education and outreach to the public. Information is disseminated through fliers, FJLEPC's newsletter, and its web site: www.lepcfairfax.org. Future plans include speaking to businesses and community groups.

2. Railroad Transportation Plan

The Hazardous Materials Systems Division of CSX Transportation has a hazardous material emergency response plan. A written copy of that plan is on file with FJLEPC and the Fairfax County Fire & Rescue Hazmat Station 34. The web site for CSX is: www.csx.com

3. Storm Drain Stenciling Program

The Northern Virginia Soil and Water Conservation District (NVSWCD) has a Storm Drain Stenciling Program which encourages youth and community groups to educate the public about the dangers of dumping anything into storm drains. This is a two-part program that includes education and stenciling of the drains. The mandatory educational component must be completed prior to stenciling and includes distributing flyers to all homes in the neighborhood regarding how to properly dispose of household and pet waste, yard debris, and used motor oil. Trained volunteers then stencil "Dumping Pollutes – Drains to Stream" on storm water inlets in pre-approved Virginia Department of Transportation (VDOT) areas. This program has proven to be an effective, low-cost method of educating large segments of the population about water

quality problems. Last year NVSWCD reported that more than 900 households were educated with this program. (3)

4. Household Hazardous Waste Program (HHW)

Fairfax County operates permanent HHW collection centers as a part of its recycling program for residents of Fairfax County. Information on the locations, hours of operation, types of wastes accepted and how to dispose of the wastes can be found on the County's web site www.co.fairfax.va.us. This information can be found under Public Works and Utilities or under environment.

Participation in the HHW collection program has resulted in many items being disposed of at the centers that are not hazardous waste. In addition to the confusion of what should be recycled as HHW, the inconvenience of not having collection sites located throughout the County may be affecting participation.

5. Business Wastes

Large businesses with 200+ people or that produce 100+ tons of solid waste annually must recycle their "principal recyclable materials". All other businesses are encouraged to recycle their office paper, cardboard, aluminum beverage cans, newspapers, and any other recyclable materials accepted at local recycling drop-off centers. More information is available on the County's web site. (5)

The Conditionally Exempt Small Quantity Generator (CESQG) program has been suspended. Fairfax County can no longer accept commercial hazardous waste under this program. For more information and a list of commercial hazardous waste disposal companies, access the County's web site. (6)

C. LEGISLATIVE UPDATE

Virginia H.B. 1030 was passed March 6, 2000 (effective July 1, 2000) amending the Code of Virginia (27-34.2:1) to grant Fire Marshals the authority to investigate incidents involving hazardous materials.

D. RECOMMENDATIONS

1. EQAC continues to be very concerned about the suspension of the Conditionally Exempt Small Quantity Generator (CESQG) program. The CESQG program served to remove from the waste stream small quantities of hazardous wastes that would otherwise be incinerated in the E/RRF. EQAC strongly encourages the Board of Supervisors to determine mechanisms through which this program can be reinstated.

2. EQAC recommends an aggressive public education campaign on how to properly dispose of household/residential, commercial, and industrial hazardous wastes. A “How To” chart that can be easily read and kept for continued reference is suggested.

LIST OF REFERENCES

1. Memorandum from Chief Edward L. Stinnette, Fairfax County Fire and Rescue Department, May 23, 2001.
2. Northern Virginia Planning District Commission, NVironment, Vol. 12, Number 1, Fall 1999, p. 1.
3. Northern Virginia Soil & Water Conservation District, *1998-1999 Annual Report*, page 7.
4. LEPC Connection: A Virginia Local Emergency Planning Committee Newsletter, Fall 2000, p. 1
5. Fairfax County Web site: www.co.fairfax.va/gov/dpwes/recycling/new-your_office.html
6. Fairfax County Web site: www.co.fairfax.va/gov/dpwes/trash/disposal_Hazcommer.htm
7. Fairfax Joint Local Emergency Planning Committee
8. Previous EQAC authors of this chapter and material